

REMARKS/ARGUMENTS

Claims 1-20 are all the claims pending in the application.

Reconsideration of the subject patent application and allowance of the claims are respectfully requested in view of the following remarks.

Initially, Applicant thanks the Patent Office for indicating that claims 8 and 18 contain patentable and allowable subject matter.

Claims 1-3, 6, 7, 9-14, 16, 17, 19 and 20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Hamalainen et al. (U.S. Patent No. 5,729,541) ("Hamalainen "). Applicant respectfully traverses this rejection.

Applicable case law holds that in order to anticipate a claim, a single prior art reference must disclose each and every feature of the claim.

Independent claim 1 recites, inter alia, "change request means of a base station which sends *time slot change information* to a subscriber station connected thereto by radio *when it becomes necessary to change the transmission rate for data to be sent to the subscriber station.*" Emphasis added. Independent claim 11 has a similar limitation. The Patent Office asserts that this feature is described at column 11, lines 3-7 of Hamalainen. Notwithstanding the Patent Office's assertion, Hamalainen does not disclose, teach or suggest Applicant's "change request means."

The text at column 11, lines 3-7 of Hamalainen states:

[I]n a downlink direction from the base station to the mobile station[,] the acknowledge/retransmission request burst (ARQ) is part of a combined control channel burst (C) which includes both a packet paging (PP) and a packet access grant (PAG).

This section of the Hamalainen reference merely describes a control channel burst which includes a packet paging, a packet access grant, and an acknowledge/retransmission request burst. See, e.g., Figure 4. The packet paging is used to inform a mobile station about incoming packet data transmission, and includes

a temporary packet mobile identity, temporary logical link identity, and a description of channels reserved by the network for the mobile terminated data transmission. The packet access grant includes a random number used to distinguish various requesters, a bitmap of the channels reserved for the connection, and a timing advance. The acknowledge/retransmission request burst includes an ARQ for acknowledging layer 1 messages. Col. 6, line 66-col. 7, line 21. The control channel burst, the packet paging, the packet access grant and the acknowledge/retransmission request burst (of Hamalainen) are not time slot change information (of claims 1 and 11). In fact, there is no disclosure, teaching or suggestion in the section relied upon by the Patent Office or the entire Hamalainen reference of sending time slot change information when it becomes necessary to change a transmission rate, as required in claims 1 and 11.

In contradistinction, in order to compensate for variations in the amount of data sent during communication, the change request means of claims 1 and 11 enables the data transmission rate to be changed when it becomes necessary by sending time slot change information to a subscriber station or base station, respectively.

Claim 1 further recites, inter alia, "time slot changing means of said subscriber station which, *upon receiving the time slot change information* from the change request means of the base station, *changes the time slot in which to receive data* from the base station *in accordance with the time slot change information*." Emphasis added. Independent claim 11 has a similar limitation. Hamalainen fails to disclose, teach or suggest this feature. The Patent Office avers that this feature is described at column 11, lines 39-41 of Hamalainen. However, the Patent Office has incorrectly interpreted the Hamalainen reference.

Column 11, lines 32-41, which includes lines 39-41 of Hamalainen, states:

[T]he mobile station monitors control channel bursts transmitted on a downlink channel from the base station to the mobile station until a free channel dedicated for information transfer is identified, and in a time slot of an identified free channel the mobile station transmits a channel

reservation request (PRA), and in response to receiving a packet access grant (PAG) signal from the base station the mobile station transmits packet data on the identified free channel.

In response to a channel reservation request, packet data is transmitted on an identified channel after receiving a packet access grant signal from a base station. In other words, after requesting permission (i.e., a channel reservation request) and receiving/obtaining permission (i.e., a packet access grant signal), packet data is subsequently transmitted. This is opposed to the present invention.

As described in the "Background of the Invention" section of the present invention,

the transmission rate can be changed *when permission is obtained* from the distant station *after sending thereto a request for a change of the transmission rate*, but a considerable amount of time is needed until the transmission rate is actually changed. Hence, when the amount of data to be sent varies greatly, congestion of data or the like occurs, leading to, for example, impairment of the immediacy of data sent in real time.

Page 3, lines 13-20 of the specification (emphasis added). The present invention, as set forth in claims 1 and 11, enables the data transmission rate to be changed quickly during communication without the need of requesting and obtaining permission to change the transmission rate. The transmission rate is changed upon receiving time slot change information from the change request means. Unlike the system of Hamalainen, there is no permission requested and obtained in the mobile communication system of the present invention.

Since Hamalainen fails to teach each and every limitation of independent claims 1 and 11, Hamalainen cannot anticipate these claims. Thus, the rejection of claims 1 and 11 should be withdrawn.

Dependent claims 2, 3, 6, 7, 9, 10, 12-14, 16, 17, 19 and 20 depend directly or indirectly on at least one of independent claims 1 and 11 and are patentable for at least the same reasons discussed above with respect to claims 1 and 11, in addition to the features they recite.

For example, claim 2 recites "when having sent the time slot change information to the subscriber station, the change request means of the base station begins to use the new time slot to send data contained in the next frame." Claim 12 has a similar limitation. Since Hamalainen fails to teach or suggest time slot change information, Hamalainen cannot teach this limitation. Further, Hamalainen does not begin to use a new time slot until permission is requested and obtained. In view thereof, the rejection of claims 2 and 12 should be withdrawn.

Claim 3 recites "the change request means of the base station determines the transmission rate in accordance with an instantaneous amount of data sent to the subscriber station." Claim 13 has a similar limitation. Hamalainen does not teach or suggest a change request means, and thus, this limitation is not taught. Moreover, the transmission rate of Hamalainen is specified in the channel burst beforehand. Accordingly, the § 102(b) rejection of claims 3 and 13 should be withdrawn.

Claim 6 recites "at the time of sending the time slot change information to the subscriber station, the change request means of the base station also sends reservation information indicating the time slot change timing to the subscriber station." Claim 16 has a similar limitation. Since Hamalainen fails to disclose Applicant's change request means and time slot change information, this limitation cannot be taught. Thus, the § 102(b) rejection of claims 6 and 16 should be withdrawn.

Claim 7 recites "the time slot changing means of the subscriber station determines the time slot change timing in accordance with the reservation information sent from the base station." Claim 17 has a similar limitation. Hamalainen does not

disclose Applicant's time slot changing means, and thus, cannot teach this limitation. Accordingly, the § 102(b) rejection of claims 7 and 17 should be withdrawn.

Claim 9 recites "in the case of increasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the spendable power of a transmitter in the base station." Claim 19 has a similar limitation. Hamalainen does not disclose a change request means, and thus, cannot teach this limitation. The § 102(b) rejection of claims 9 and 19 should be withdrawn.

Claim 10 recites "in the case of decreasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the sensitivity of a receiver in the subscriber station and the sendable power of a transmitter in the base station." Claim 20 has a similar limitation. Hamalainen fails to teach or suggest a change request means, and thus, cannot teach this limitation. Accordingly, the rejection of claims 10 and 20 should be withdrawn.

Claim 14 recites "the change request means of the subscriber station detects the instantaneous amount of data from that amount of data received from a man-machine interface which has yet to be sent to the subscriber station." Since Hamalainen does not disclose a change request means, Hamalainen cannot teach this feature. Thus, the rejection of claim 14 should be withdrawn.

Claims 4, 5 and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hamalainen in view of Kokufu (Japanese Patent No. H06-53875). Kokufu does not remedy the deficiencies of Hamalainen, and the individual or combination of the Hamalainen and Kokufu references does not teach the invention of claims 4, 5 and 15 for the following reasons.

Dependent claims 4, 5 and 15 depend directly or indirectly on at least one of independent claims 1 and 11 and are patentable for at least the same reasons discussed above with respect to claims 1 and 11, in addition to the features they recite.

For example, claim 4 recites "the change request means of the base station detects the instantaneous amount of data from that amount of data received from a switching center which has yet to be sent to the subscriber station." Neither Hamalainen nor Kokufu teach or suggest a change request means, and thus, this limitation is not suggested or taught in either reference. Accordingly, the rejection of claim 4 should be withdrawn.

Claim 5 recites "at the time of sending the time slot change information to the subscriber station, the change request means of the base station obtains the time slot change information from a provisional channel memory provisionally pre-assigned the time slot to be used for the transmission of the next frame." Claim 15 has a similar limitation. Neither Hamalainen nor Kokufu teach or suggest a change request means, and thus, this limitation is not suggested or taught in either reference. Thus, the § 103(a) rejection of claims 5 and 15 should be withdrawn.

Finally, the combined disclosures of Hamalainen and Kokufu do not render the pending claims obvious because there is no motivation, absent the hindsight reconstruction of the present invention, to modify the disclosure of Hamalainen in accordance with the disclosure of Kokufu.

"When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." In re Rouffet, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998); see also MPEP § 2143.01. Virtually all inventions are combinations of old elements. See In re Rouffet, 47 USPQ2d at 1457. If identification of each claimed element in the prior art were sufficient to negate patentability, the Patent Office could use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed

invention. See id. To prevent the use of hindsight based on the teachings of the patent application, the Patent Office must show a motivation to combine the references in the manner suggested. See id. at 1457-58.

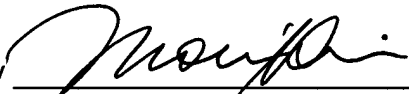
In Rouffet, the Court of Appeals held that although all elements recited in the claims of Rouffet's application were disclosed in the applied prior art references, the rejection under 35 U.S.C. § 103 was improper because there was no suggestion as to why one skilled in the art would have been motivated to combine the references in such a manner as to render the claims obvious. See id. at 1457.

The situation is, at best, the same in this case. Even if all elements recited in the pending claims can be found in the combined disclosures of Hamalainen and Kokufu (although they cannot), there is no reason that one of ordinary skill in the art would have been motivated to combine these references in such a manner as to render the pending claims obvious. The Patent Office lists reasons why it believes one would have found the invention to be obvious in view of Hamalainen and Kokufu. However, the Patent Office's rationale is not suggested anywhere in the applied references (e.g., the Patent Office has not identified any support in the applied references); it is no more than a hindsight reliance on the teachings in the present application of the advantages of the present invention.

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Applicant submits that the present application is now in condition for allowance.
Reconsideration and favorable action are earnestly requested.

Respectfully submitted,

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